

U.S. Department of Energy  
Grand Junction Projects Office  
April 1995

## Explanation of Significant Difference

### Introduction

The U.S. Department of Energy (DOE) has prepared this Explanation of Significant Difference (ESD) to provide revised costs for the cleanup of Operable Unit I (OU I) of the Monticello Mill Tailings Site in Monticello, Utah, and revised estimates of the number of properties requiring remediation at the Monticello Vicinity Properties (MVP) Site. OU I entails the cleanup of the millsite and construction of an on-site repository for their permanent disposal.

The DOE is the lead agency responsible for the Monticello cleanup project activities. The cleanup is being conducted pursuant to a Federal Facility Agreement between the U.S. Environmental Protection Agency (EPA), the State of Utah and the Department of Energy under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), known as Superfund.

Since the Record of Decision (ROD) for the MVP Site was issued in 1989, the number of properties included for remediation has increased. Since the ROD for the Monticello Mill Tailings Site was issued in 1990, the repository cost has changed. In light of these changes, DOE is issuing this Explanation of Significant Difference, to explain the differences in cost and the increase in the number of properties. This Explanation of Significant Difference is required by CERCLA Section 117(c) and will become part of the Administrative Record file for the Monticello cleanup projects located at:

Monticello Area Office  
Abajo Building, 95½ South Main,  
Monticello, Utah 84535

The Administrative Record file and Information Repository contains copies of this notice as well as other documents on the Monticello project, arranged by subject. Office hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday. Special arrangements can also be made to visit the office outside of business hours and during the weekend by contacting Cyndi Eldredge at 801-587-2615.

Additional copies are located at the DOE Public Reading Room in the Technical Library at the Grand Junction Projects Office, 2597 B½ Road, Grand Junction, Colorado.

Citizens can obtain additional information by calling Joel Berwick at the Monticello Area Office at 801-587-2615, or Audrey Berry at DOE's toll-free number, 1-800-269-7145.

### Summary of Site History, Contamination Problems, and Selected Remedy

The Monticello Mill Tailings Site (or millsite) is a 110-acre tract of land located south of the city of Monticello in southeastern Utah. An estimated 1 million tons of uranium and vanadium ore was processed at the millsite from 1942 to 1960. The amount of mill tailings and contaminated soils on the site and throughout the city of Monticello resulting from this operation that will require cleanup is approximately 2.6 million cubic yards.

Tailings contain naturally occurring materials that decay to radium and produce radon, a radioactive gas. If inhaled over a long period of time, particularly in enclosed areas, radon can cause damage to lung tissue, increasing the risk of lung cancer. The purpose of the

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cleanup projects is to minimize the risks to the public and environment from exposure to the mill tailings and the radon gas they produce.

In November 1989, a ROD for the MVP Site was signed. The ROD is the document that explains the agency's reasons for selecting a particular cleanup method or remedy. The remedy selected for the MVP Site is removal of tailings from the included properties and storage on the millsite prior to final disposal in the on-site repository.

In September 1990, the EPA, State of Utah and DOE signed a ROD for the Monticello Mill Tailings Site. The remedy selected for OU I of the Monticello Mill Tailings Site is removal of the tailings, contaminated buildings, and equipment to a permanent repository. This repository is to be constructed on DOE-owned property south of and adjacent to the present millsite.

#### Description of Significant Difference and the Basis for those Differences

The ROD established the capital cost of the selected remedy for remediation of the millsite as \$52,100,000 (1989 dollars). This cost included site preparation, tailings removal, construction of a repository, construction management and design. The equivalent cost in 1995 dollars is in the range of \$100,700,000 to \$115,800,000, an increase of between \$48,600,000 to \$63,700,000.

The proposed on-site repository design was later determined to be unacceptable based on a performance assessment which indicated that the repository would not be protective of State promulgated ground-water protection regulations. One factor contributing to the decision to reevaluate the on-site alternative was the high cost of the repository. A secondary concern was that the repository, as it was originally designed, was not constructible. The DOE, the EPA, and the State of Utah Department of Environmental Quality

undertook a study to evaluate a number of alternatives, including the truck haul of tailings to the White Mesa facility south of Blanding. In December 1994, DOE decided to proceed under the original Record of Decision and construct a repository on the far-south site utilizing a design that ensured protection of ground water.

Specific factors contributing to the increase and the reason for the increase are described in the table on the following page.

The MVP ROD stated 204 properties were anomalous properties with 91 of these properties to be included in the MVP Site. At this time, over 400 properties are expected to be included in the MVP Site. The remediation of the properties has been divided into 5 operable units. Cleanup criteria for the properties are still the same as established in the ROD. The ROD states that the average cost of remedial action of a vicinity property is \$65,000. The current total project cost is approximately \$30,000,000, which equates to an average property cost of \$73,000. This cost increase per property is due to inflation and to an increase in the size and complexity of the more recently included properties.

#### Support Agency Comments

The EPA and State of Utah Department of Environmental Quality (UDEQ) concur with the Explanation of Significant Difference and concur with the implementation of the remedies at the Monticello Vicinity Properties and the Monticello Mill Tailings NPL sites. Considering the new information that has been developed and the changes that have been made to the selected remedies, EPA and UDEQ believe that the remedies will be protective of human health and the environment.

## COST GROWTH TABLE FOR OPERABLE UNIT I

FACTOR	AMOUNT OF INCREASE	REASON FOR INCREASE
Escalation	\$24,400,000	Increased cost of money estimated at 24 percent over 6 years between 1989 when the ROD estimate was completed and 1995, the current estimate. Activities completed prior to 1995 were escalated to the approximate mid-point of the activity.
Design and project oversight	\$21,200,000 to \$27,200,000	Increased complexity of the project (cell design is equivalent to design for a hazardous waste landfill), increased project duration (project was originally expected to be completed in 1997; it is now planned for completion in 2001), and additional project design and oversight requirements have been defined.
Repository size and complexity	\$3,000,000 to \$9,000,000	Revision of the tailings volume estimate based on 1991 drilling activities (increase from 1,800,000 cubic yards to 2,600,000 cubic yards) and installation of a double liner system to protect ground-water quality.
Site Preparation and Land Acquisition	\$2,800,000	Increased complexity of the drainage system, additional containment ponds, purchase of 400 additional acres at increased cost.
Tailings Removal	possible savings of over \$2,000,000	Possible efficiencies have been identified in tailings excavation, load and haul activities.

### Affirmation of Statutory Determinations

The selected remedy for OU I of the Monticello Mill Tailings Site and the MVP Site remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective.

The remedy does not satisfy the statutory preference for treatment which reduces the toxicity, mobility, or volume of hazardous substances as its principal element. The principal threat at the vicinity properties and the millsite will be addressed by the excavation, removal, and emplacement of the contaminated soils and materials into the proposed repository.

### Public Participation Activities

DOE will publish a Notice of Availability and brief description of this ESD in the San Juan County, Utah newspapers. A press release will also be issued to San Juan County news media. The ESD is available to the public in the Administrative Record file and Information Repository. DOE encourages residents to visit the Monticello Area Office, where the Administrative Record is located. (See Introduction for information on location and office hours.) Copies of this ESD will be available at the Area Office. The ESD will also be mailed to individuals on the Utah key contacts mailing list. DOE will accept comments on the ESD for 30 days from the date of the Notice of Availability. DOE will provide responses to any comments received to the regulatory agencies.